

Claims

1. A light emitting device which comprises a phosphor and a semiconductor light emitting element,

wherein the phosphor has Eu³⁺ as a luminescent center ion, wherein a minimum emission intensity of the phosphor within the excitation wavelength range of 380 nm to 410 nm in an excitation spectrum is 65% or more of a maximum emission intensity, and wherein the phosphor has an emission efficiency at 400 nm of 20% or more, and

wherein the semiconductor light emitting element emits light in the region from near-ultraviolet light to visible light.

2. The light emitting device according to claim 1, wherein said phosphor is a phosphor having a maximum emission intensity of 3 times or more the intensity of a peak around 465 nm which is in an excitation band of the f-f transition of Eu³⁺, in the excitation spectrum.

3. The light emitting device according to claim 1 or 2, wherein said phosphor is a fluorescent complex having Eu³⁺.

4. The light emitting device according to claim 3, wherein said phosphor is a fluorescent complex containing an

aromatic group in a ligand.

5. The light emitting device according to claims 1 to 4, wherein said phosphor is in a solid state.

6. The light emitting device according claims 1 to 5, which emits white light.

7. The light emitting device according to claims 1 to 6, wherein said semiconductor light emitting element is a laser diode or light emitting diode, which emits light having a peak wavelength ranging from 370 nm to 470 nm.

8. The light emitting device according to claims 1 to 7, wherein an ultraviolet shielding treatment is performed so that said phosphor is not irradiated with ultraviolet rays of 350 nm or less.

9. A lighting system which comprises the light emitting device according to claims 1 to 8.

10. An image display unit which comprises the light emitting device according to claims 1 to 8.